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ABSTRACT

The development of instruments to measure the attainment of career education objectives in the middle grades was the objective of this study. The procedures used involved the following tasks: analysis of career education objectives by a jury of vocational and industrial arts teachers; writing test items appropriate for evaluating learning in the cognitive, affective, and psychomotor domains related to the objectives; developing techniques for scoring the tests; and testing the instruments for validity and reliability. Since the objectives were pupil-centered and flexible it proved to be impossible to write objective items. The subjective nature of the test exposed an unanticipated problem of scoring, which was solved by the development of an explicit scoring key to be used by two independent scores. The final form of the test contains 25 self and work-related items calling for written responses and is to be used at the ninth grade level. The list of objectives sent to the judges, the revised list of objectives, the test, and the scoring key for the test are appended. (Author/EC)

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Final Report

Project No. 2-D-024
Grant No. OEG-4-72-0010

THE DEVELOPMENT OF AN EVALUATION SCHEME FOR CAREER EDUCATION IN THE MIDDLE GRADES

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U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

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Author's Abstract

An evaluation scheme for career education in the middle grades was originally conceived as a project to develop the objectives of career education in the middle grades and to evolve an evaluation program that would measure these objectives. Although the original intent was to develop an objective test, the final outcome resulted in a subjective instrument.

A list of objectives was developed and submitted to a jury representing vocational and industrial arts leaders. The analysis of the jury response resulted in the objectives upon which the test was based.

Test items were written to evaluate attainment in each of the career objectives. The pupil-centeredness and flexibility of the objectives, however, rendered it impossible to write objective items; thus, the test became a subjective one.

The subjective nature of the test exposed a problem of scoring that had not been anticipated. A scoring key giving explicit instructions for evaluating each item was developed and was tested by having two different scorers grade two sets of tests. The correlation coefficients of .93 and .83 which resulted, reflected excellent agreement between scorers in light of the subjective nature of the test.

The evaluation instrument that resulted from the project can have excellent application in evaluating programs with objectives compatible with those used in the development of the test. Its major weakness lies in the laborious task of scoring, but one deems the extra labor worthwhile when he considers that the instrument measures the success of a flexible program aimed at helping pupils understand themselves as they relate to the world of careers.

Final Report

THE DEVELOPMENT OF AN EVALUATION SCHEME FOR CAREER EDUCATION IN THE MIDDLE GRADES

An evaluation scheme for career education in the middle grades was originally conceived as a project to develop the objectives of career education in the middle grades and to evolve an evaluation program that would measure the attainment of these objectives. The evaluation scheme was broadly conceived; very few preconceived ideas concerning evaluation procedures entered into its formation. It was hoped, however, that at least one portion of the evaluation scheme would be an objective test that could be scored and analyzed by computer. To some extent, these expectations were not fully realized, but the overall success of the project was most rewarding.

Statement of the problem. The problem to which this proposal was directed was the development of instruments to measure the attainment of objectives of career education. The task involved validating career education objectives; selecting and developing instruments appropriate for evaluating learning in the cognitive, affective, and psycho-motor domains; developing the instruments; developing techniques for scoring the tests; and testing the instruments for validity and realibility. Norms were to have been established in order that comparisons could be made to determine if experimental groups experienced achievement in access to that of control norms. These norms were to be established for the various grade levels within the middle grade program for pupils

enrolled in programs of career education. The following were the objectives of the study:

1. To validate the objectives of career education for the middle grades.
2. To identify the evaluation scheme appropriate for use with middle grade career education.
3. To identify instruments appropriate for measuring objectives determined in objective 1.
4. To administer these instruments to sample populations in both experimental and control groups and/or administer these instruments as pre-tests and post-tests in order to obtain data necessary for reliable validity checks.
5. To revise instruments in order to improve reliability and validity.
6. To administer revised instruments and to test for reliability and validity.
7. To field test the instrument through actual application in all available situations.
8. To analyze data and thereby evaluate the instrument.

Assumptions. At the beginning of the project, it was assumed that if behavioral objectives could be identified, an objective test could be developed. It was further assumed that the test could be scored by computer. While both of these assumptions may be valid, time and resources were not adequate to carry the test development to that point.

Procedure. The project proposal identified six task areas. Task One consisted of validating objectives of career education. The objectives listed in the project proposal were expanded, and a form was developed to be submitted to a jury for validation (a copy is presented in Appendix A). Simultaneously, a postcard questionnaire to identify people willing to serve on the jury was developed and sent to 81 teacher educators, supervisors, or project personnel who were involved with career education at the middle grade level. Table 1 indicates that of 81 cards sent,

68 or 83.9% were returned. Of these 68 returned, 65 indicated that they would be willing to serve.

TABLE 1

REQUESTS TO SERVE ON THE JURY

Number of Cards Sent	Number Returned			Percent Returned
	Yes	No	Total	
81	65	3	68	83.9%

Table 2 indicates that the objectives of the validation forms were sent to the 65 educators who had indicated their willingness to serve on the jury. Forty-eight or 73.8% returned the objective validation forms. Responses were analyzed, and the objectives were revised.

TABLE 2

OBJECTIVE VALIDATION FORM RETURNS

Number of Forms Sent	Number Returned	Percent Returned
65	48	73.8%

The frequency of jury responses under the four categories, Most Important, Important, Less Important, and Not Important, is shown in Table 3. A value of four was given to the highest rating, Most Important; and values of three, two, and one were given to Important, Less Important, and Not Important, respectively. The frequency of responses was multiplied by the numerical value, thus giving a total numerical value for each item; this value was divided by the number of responses to determine a mean value for each item. Items having a mean value of less than three were considered to be less than Important and were eliminated from the list.

TABLE 3

JURY RESPONSE TO THE OBJECTIVES

Objective	Most Important	Important	Less Important	Not Important	Mean Value
1	23	17	6	1	3.319
2	13	22	9	3	2.976
3	13	23	9	2	3.000
4	8	20	13	5	2.617
5	15	14	15	4	2.833
6	16	23	8	1	3.125
7	16	21	8	3	3.042
8	5	17	23	3	2.500
9	14	19	14	1	2.958
10	4	26	14	4	2.625
11	31	15	1	1	3.583
12	22	23	3	0	3.396
13	14	14	15	5	2.771
14	26	15	7	0	3.396
15	9	24	14	1	2.854
16	17	26	4	1	3.229
17	26	19	3	0	3.458

A number of the jurors made comments concerning various objectives; these comments were considered and used in revising or rewriting the objectives. The following is the revised list:

1. The pupil will demonstrate his comprehension of his aptitudes by describing the kinds of career activities that would provide him with satisfying and meaningful employment.

2. The pupil will demonstrate knowledge of self-appraisal by describing techniques for collecting and analyzing information about himself.

3. The pupil will demonstrate his comprehension of work by describing it in terms of the responsibility of the worker to the employee, by describing it as opposed to play, and by describing it as a regularly scheduled activity.

4. The pupil will apply knowledge of the changing nature of work by developing a tentative plan of continuing study for a career of his choice that will make it possible to keep up with developments in that career area.

5. The pupil will manipulate tools and materials and engage in processes related to occupations in his areas of interest.

6. The pupil will demonstrate his comprehension of the need for an education by describing the values of education to occupational areas that are of special interest to him.

7. The pupil will analyze the role work plays in the life of man and how an individual's attitudes about work affect other aspects of life by identifying, analyzing, and discussing, examples of forces at work in the world of work.

8. The pupil will demonstrate his comprehension of the importance of the diversity of talents found in individuals by discussing the significance of this diversity as it relates to the world of work and as it relates to his assets and limitations.

9. The pupil will demonstrate his comprehension of his educational needs by planning a series of learning experiences that will lead to his chosen line of work.

Task Two consisted of the identification of evaluation techniques appropriate for this kind of evaluation. No appropriate techniques or instruments were found to be in existence, and it was decided that the first step should consist of developing a paper-and-pencil test to measure the attainment of each of the nine objectives in the revised list. While other types of evaluation techniques might be appropriate, time and the lack of materials and resources made it impossible to pursue any of the other possibilities.

Original efforts in test construction were centered around the writing of items that could be marked on an IBM answer sheet. It was soon discovered that the complexity and flexibility of the objectives made it virtually impossible to write good items and that open-end questions would have to be utilized in order to accommodate the varying interests of students. To accomplish this end, the objectives were subdivided into more specific terms, and items were written for each sub-objective. Analysis of the items later revealed that this process had resulted in some duplication which had to be removed. Appendix B shows this list of expanded objectives.

An open-ended test was developed and administered to a pilot group of 15 tenth grade students who had had career education in the ninth grade. After the project director and test consultants had reviewed the responses on these tests, the group was interviewed and asked to react to the instrument. Many confusing points were identified, and the revised instrument (Appendix C) ensued.

A number of tests sites throughout the United States were identified, and copies of the test were sent for administration. Many of those who had agreed to help test the instrument did not follow through with any kind of response, and some who responded indicated that the test was too difficult. Comments and observations convinced the project director and others involved that the test would serve better as a terminal achievement test rather than as an instrument to measure behavioral change. It was further concluded that this instrument should be used at about the ninth or tenth grade level, for it was at this level that the greatest degree of success was experienced and upon which further analysis was based.

A problem connected with the scoring of a test such as the one developed is identifying a method by which two or more scorers will come out with similar results. A scoring key, identifying the kinds of responses to look for and some of the pitfalls the scorer might find, was developed and used by different scorers. The scoring key (Appendix D) was used on two sets of tests scored by both the test development consultant and the project director to determine the similarity in scores. The first set of test scores consisted of 25 tests administered to ninth grade students during the first part of the second semester of that year. The scoring key was carefully used to score the items, from the total test scores computed, a correlation coefficient was determined. The coefficient of .93 which was revealed seemed to be much higher than that which had been

expected, but verification supported the findings. An item-by-item comparison of the scores, however, revealed considerable discrepancy between total scores and those scores awarded to some individual items. Because one score was higher on some items while the other score was higher on other items, the total resulted in a high correlation.

The scoring key was further analyzed to determine the effect of the instructions on the scores awarded and was revised to produce more uniformity of total scores for individual items.

A second administration of the test to 15 ninth grade students at the end of the school year was used to check the revised scoring key. The correlation coefficient of total scores for this group was .83, which was still quite acceptable and within the range that had been originally anticipated. Again, an item-by-item analysis was made, and it was found that there was consistency in total item score differential rather than the degree variance found in the previous administration. Although there may still be room for improvement in the scoring key, the agreement between scorers is excellent in light of the subjective nature of the test.

Recommendation for Further Research. It is still the opinion of the researcher that an objective test, using the subjective test as a base, can be developed. This task will require the combined efforts of many specialists and considerally more funds than were available for the current project.

In addition, procedures need to be worked out to utilize fully the instruments that have been developed and to evaluate further the reliability of scoring. Tests will be made available to persons desiring to use them, and an effort will be made to follow up on scoring data.

Conclusions. The following general conclusions concerning the project should be emphasized at this point.

1. Within the time and limitations of the project, it was not possible to develop an objective test based on the objectives that resulted from the project.
2. The development of career education objectives for the middle grades clearly indicated that vocational and industrial arts educators feel that objectives should be flexible, should introduce and orient the student to careers compatible with his talents, and should meet individual needs.
3. A subjective test that could be used at the ninth grade level to measure the attainment of the objectives was developed. The major drawback to this instrument, however, is the difficulty in grading it.

APPENDIX A

CAREER EDUCATION OBJECTIVES
FOR
GRADES SIX THROUGH EIGHT

Please rate each of the following objectives by marking an "X" in the box corresponding to your choice. Space is provided at the end of this instrument for any additional objectives you might want to add, or they may be attached. Your comments are also welcomed.

The scheme for writing objectives used here provided for clear identification of the behavioral domain (cognitive, affective, or psychomotor) for which the objective is written and the level of performance within that domain. This is explained in italics following each objective.

Most Important | Important | Less Important | Not Important

1. The pupil will demonstrate his comprehension of his aptitudes by describing the kinds of career activities that would provide him with satisfying and meaningful employment.

   Comprehension indicates cognitive behavior in which he will interpret, translate, or summarize his knowledge of his aptitudes.

2. The pupil will demonstrate his knowledge of his own attainment level by describing occupations that are within his level of attainment.

   To have knowledge involves the lowest level of cognitive behavior in which the student will recognize or recall facts.

3. The pupil will demonstrate knowledge of self-appraisal by describing techniques for collecting and analyzing information about himself.

   The pupil will demonstrate cognitive behavior by recalling appraisal techniques.

4. The pupil will demonstrate knowledge about careers by describing the qualifications, duties and rewards of a minimum of one job from each of the fifteen clusters identified by the U. S. Office of Education.

   The pupil will recall facts about qualifications, duties, and rewards of careers.

Most Important | Important | Less Important | Not Important

16. The pupil will demonstrate his comprehension of the importance of the diversity of talents found in individuals by discussing the significance of this diversity as it relates to the world of work.

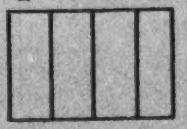
    The pupil will interpret the importance of the various talents of individuals in terms of their significance to the world of work.

17. The pupil will demonstrate his comprehension of his educational needs by describing them in terms of his future work as he perceives it.

    The pupil will interpret his knowledge of his educational needs in terms of his future work.

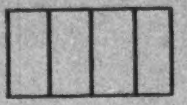
Most Important | Important | Less Important | Not Important

5. The pupil will demonstrate his comprehension of the job market in his locality by describing it in terms of jobs with employment potential and of jobs for which there are likely to be few available positions.



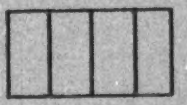
The pupil will interpret the local job market as it relates to the availability of jobs.

6. The pupil will demonstrate his comprehension of work by describing it in terms of the responsibility of the employer to the worker, work as opposed to play, and work as a regularly scheduled activity.



The pupil will interpret his knowledge of work in terms of the categories listed.

7. The pupil will apply knowledge of the changing nature of work by developing a plan of continuing study for a career of his choice that will make it possible to keep up with developments in that career area.



At the application level of the cognitive domain, he will apply the material he has learned to each situation which is different from the situations in which it was originally learned.

8. The pupil will value various employment opportunities by identifying, giving reasons for his choice, the one job from each cluster that he would least like to have.

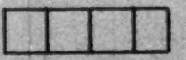
To value indicates affective behavior in which the learner displays behavior consistent with a single belief or attitude in situations where he is not forced to comply.

9. The pupil will value various employment opportunities by identifying the one job from each cluster that he would most like to hold and clearly indicating the characteristics of this job that he would find satisfying.

The pupil will indicate his belief or attitude of jobs in terms of his own self-concept.

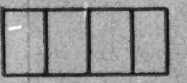
Most Important | Important | Less Important | Not Important

10. The pupil will display a value of the jobs he most likes and least likes by ranking them on a scale of 1 to 10.



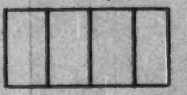
He will indicate his attitude toward certain jobs by ranking them.

11. The pupil will manipulate tools and materials and engage in processes related to occupations in his areas of interest.



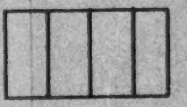
Manipulation is a psychomotor behavior in which a degree of skill beyond imitation is developed.

12. The pupil will demonstrate his comprehension of the need for an education by describing the values of education to occupational areas that are of special interest to him.



The pupil will interpret facts concerning values of education as they relate to career areas of interest to him.

13. The pupil will demonstrate value for jobs by listing outstanding contributions, needs, employment requirements, and working conditions of jobs he previously indicated as being beneath his dignity.



The pupil will display affective behavior, attitudes, toward certain jobs.

14. The pupil will analyze the role work plays in the life of man and how an individual's attitudes about work affect other aspects of life by identifying, analyzing and discussing examples of these forces at work in the world of work.

To analyze requires cognitive behavior involving the separating of a complex entity into its part and drawing comparisons and relationships between the elements.

15. The pupil will demonstrate his comprehension of the developmental tasks of choosing a career by describing the various steps involved.

The pupil will paraphrase and interpret the various steps involved in the developmental tasks of choosing a career.

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APPENDIX B

REVISED CAREER EDUCATION OBJECTIVES
FOR
GRADES SIX THROUGH EIGHT

1. The pupil will demonstrate his knowledge of self-appraisal by applying one technique to record information about himself which he will then relate to a career choice.

    1.1 The pupil will identify one self-appraisal technique.

    1.2 The pupil will apply a selected self-appraisal technique by recording three items of information about himself.

    1.3 The pupil will relate the above information (1.2) to a career choice which he believes would be satisfying and meaningful to him.

2. The pupil will demonstrate his comprehension of his personal characteristics by describing the kinds of career activities that would provide him with satisfying and meaningful employment.

    2.1 The pupil will list three careers that he believes could provide him with the most satisfying and meaningful employment.

    2.2 The pupil will list three personal characteristics he believes he possesses which will suit him to each of the careers previously listed.

    2.3 The pupil will list the two careers he would find least satisfying.

    2.4 The pupil will list three personal characteristics he believes he possesses which would conflict with each of the careers he would find least satisfying.

3. The pupil will demonstrate his comprehension of work as a regularly scheduled activity by describing it in terms of the responsibility of the employer to the worker, responsibility of the worker to the employer, and work as opposed to play.

    3.1 The pupil will list and explain three important responsibilities of the employer to the worker.

    3.2 The pupil will list and explain three important responsibilities of the worker to the employer.

    3.3 The pupil will explain three differences between work and play.

4. The pupil will apply knowledge of the changing nature of work by developing a tentative plan fo continuing study for a career of his choice that will make it possible to keep up with developmments in that career area.

    4.1 The pupil will list three significant characteristics of the changing nature of work.

    4.2 The pupil will apply the characteristics of the changing nature of work by identifying steps that should be taken to keep up-to-date in a career of his choice.

5. The pupil will demonstrate his comprehension of the need for an education by describing the values of education to occupational areas that are of special interest to him.

    5.1 The pupil will list three educational and/or training requirements for a career of his choice.

    5.2 The pupil will analyze educational and/or training requirements for a career of his choice by stating the reasons for educational/training needs for that particular career.

    5.3 The pupil will demonstrate knowledge of sources and/or training for a career of his choice.

6. The pupil will analyze the role work plays in the life of man and the effects of an individual's attitudes about work on other aspects of life by identifying, analyzing, and discussing examples of these forces at work in the world of work.

    6.1 The pupil will demonstrate his knowledge of the role work plays in the life of man by listing three major aspects.

    6.2 The pupil will demonstrate his comprehension of the role work plays in the life of man by describing an important effect of each of the above mentioned major aspects on man's life.

    6.3 The pupil will demonstrate his knowledge of attitudes about work that affect other aspects of man's life by stating three such attitudes.

    6.4 The pupil will demonstrate his comprehension of the effects attitudes about work have on other aspects of man's life by describing an important effect for each of the three attitudes mentioned above.

    6.5 The pupil will analyze the role work plays in the life of man by relating the following to a career of his choice: (1) three effects of the role of work in man's life and (2) three effects of his attitude toward work.

7. The pupil will demonstrate his comprehension of the importance of the diversity of talents found in individuals by discussing the significance of this diversity as it relates to the world of work and as it relates to his assets and limitations.

    7.1 The pupil will demonstrate his knowledge of self by listing three of his talents that have career potential.

    7.2 The pupil will translate the diversity of his talents by naming two career opportunities possible for each of the three talents mentioned above.

    7.3 The pupil will demonstrate knowledge of his lack of talent by identifying one limitation that would hinder him in a career of his choice.

    7.4 The pupil will translate the above mentioned limitation by stating two reasons why it would hinder him in a career of his choice.

    7.5 The pupil will explain how the diversity of talent is related to the world of work.

8. The pupil will demonstrate his comprehension of his educational needs by planning the steps that will lead to a career of his choice.

    8.1 The pupil will demonstrate his knowledge of requirements for a career of his choice by listing three educational or training requirements.

    8.2 The pupil will demonstrate his knowledge of the preparatory requirements for entering a career of his choice (1) by giving the title of the educational or training program, (2) by mentioning an institution offering such a program, (3) by specifying the length of learning time required, and (4) by estimating the total cost of an educational or training program.

9. The pupil will manipulate tools and materials and engage in processes related to occupations in areas of his interest.

    9.1 The pupil will identify two occupations that are of interest to him.

    9.2 The pupil will list the most common tools, materials, and processes that are related to each occupation and that can be performed in a school career education facility.

    9.3 The pupil will demonstrate and/or explain the use of a minimum of two tools as applied to materials and processes in each of the occupations chosen.

APPENDIX C

E.C.U. Career Education Test

Developed by: Dr. William R. Hoots, Jr.
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Greenville, North Carolina

Special Consultant: Dr. Norman C. Pendered
School of Technology
East Carolina University

To the student: This is a test on some of the things you may have learned in your Career Education classes.

The score you make on this test will NOT become a part of your grade or your student record.

The test is designed to help you find out just where you are at this time in making a choice of a life's career. The results of the test may also be useful to your teachers in helping them improve their courses in Career Education.

Perhaps at this time you are not ready yet to make a choice of career. Maybe you have some fears, doubts, misgivings, and uncertainties about yourself and about some of the careers in which you are interested. For you to experience these feelings is understandable and quite normal. BUT - for purposes of this test - do the best you can in answering the items. When a question asks you to identify a career choice - either of great or of no interest to you - base your decision on how you feel and what you know at this particular time.

This test is probably somewhat different from other tests you may have taken in school because many of the items relate to YOU. Some of the questions will be easy for you to answer; some will be more difficult. Each question will cause you to think! There are 25 items in this test. Be sure to read each question carefully; then answer each one.

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1. In your study of career education, you learned several ways or techniques to recognize your personal strengths and weaknesses. In the space below write the name of one of these ways or techniques.

_____

2. Write down THREE items of information - personal things about yourself - that you learned by using the above-mentioned (or another) technique.

(1)_____

(2)_____

(3)_____

3. Keeping in mind the answers you gave in item 2, write several sentences which relate these personal facts about yourself to a career that you believe at this time would be satisfying to you.

_____

_____

_____

_____

_____

_____

_____

_____

4. You may not be ready now to make a definite choice of career, but list THREE careers which you think might provide you with satisfying and meaningful employment.

Career 1:_____

Career 2:_____

Career 3:_____

5. For each of the three careers you identified in item 4, mention THREE personal characteristics that you believe you possess which seem to suit you to these careers.

   In answering this question, you may use the same three personal traits or different ones with each of the career choices you have selected.

   Career 1 (from item 4): _____

   My personal characteristics which seem to fit me to this career are:

   (1) _____

   (2) _____

   (3) _____

   Career 2 (from item 4): _____

   My personal characteristics which seem to fit me to this career are:

   (1) _____

   (2) _____

   (3) _____

   Career 3 (from item 4): _____

   My personal characteristics which seem to fit me to this career are:

   (1) _____

   (2) _____

   (3) _____

6. In considering various careers for your life's work, probably you have found several that would be dull, uninteresting, or less satisfying to you. Name TWO of these careers.

   (1) _____

   (2) _____

7. Most people possess certain personal traits or characteristics which conflict with or interfere with careers which are LEAST SATISFYING to them. For each of the careers mentioned in item 5, list THREE personal characteristics that you possess which you feel would conflict with these careers.

Career 1 (from item 6):_____

My personal characteristics which might conflict with this career are:

(1)_____

(2)_____

(3)_____

Career 2 (from item 6):_____

My personal characteristics which might conflict with this career are:

(1)_____

(2)_____

(3)_____

8. Although some kinds of work are fun to some people, there are big differences between work as opposed to play. Give THREE differences between work and play.

(1)_____

(2)_____

(3)_____

9. Working involves more than coffee breaks, pay day, vacation leave, sick pay, and just putting in time day after day. Each worker has certain responsibilities to his employer, and, in return, the employer has certain responsibilities to his workers.

A. What are THREE important responsibilities of an employer to his workers?

(1)_____

(2)_____

(3)_____

B. What are THREE important responsibilities of a worker to his employer?

(1) _____

(2) _____

(3) _____

10. The world and all its people are constantly changing. This constant change applies also to the world of work. List THREE characteristics or features of the changing nature of work.

(1) _____

(2) _____

(3) _____

11. Work plays an important role in the life of man. What are THREE things that work does for man?

(1) _____

(2) _____

(3) _____

12. In item 11 you identified three things which work does for man. In this question, you are asked to relate each of these things to a career of your choice. In other words, what effect do you think each of these roles which work plays in the life of man could have on a career in which you are interested?

A. If I were a/an _____,
(insert title of career here)
then the role which work plays in the life of man as I described it in item 11, part (1), might affect my career or life as follows:

_____

_____

_____

_____

B. If I were a/an _____,
(title of career-may be same or different from above)
then the role which work plays in the life of man as I described it in item 11, part (2), might affect my career or life as follows:

_____

_____

_____

_____

C. If I were a/an _____,
(title of career - may be same or different)
then the role which work plays in the life of man as I described it in item 11, part (3), might affect my career or life as follows:

_____

_____

_____

_____

13. People have attitudes about everything. For example, a person will have a certain attitude toward the war in Viet-Nam, toward the opposite sex, or toward the food he eats!

One can also have an attitude toward work. What do you think are some of the attitudes that man has toward work? Identify THREE of these attitudes in the spaces below:

(1)_____

(2)_____

(3)_____

14. Man's attitude toward his work can directly affect some of the other phases or aspects of his life. For each of the attitudes toward work which you mentioned in item 13, briefly state one important effect this attitude could have on the other portions of man's life.

(1)_____

(2)_____

(3)_____

15. A talent is defined as an unusual mental capacity, ability, skill, or aptitude. In other words, it is a special gift that fits you for a particular kind of work.

Think about your special talents; then, list THREE of them which you feel have career potential.

(1)_____

(2)_____

(3)_____

16. For each of the special talents that you identified in item 15, mention TWO possible career opportunities which seem to be related to these talents.

Special or Personal Talent	Possible Careers
1._____	1A_____
	1B_____
2._____	2A_____
	2B_____
3._____	3A_____
	3B_____

17. No one is perfect! Lack of talent is evident everywhere. For a career choice which you have in mind, identify in the space below ONE personal weakness, limitation, or lack of talent that you possess which would keep you from being successful in this career.

Career choice:_____

Personal limitation or lack of talent:_____

_____

18. Why do you think the above limitation would keep you from being successful? Give TWO reasons.

(1)_____

(2)_____

19. No two individuals are exactly alike. People differ from each other in many ways, for example, in "looks", mental ability, and personality.

The "law of differences" applies also to the special gifts or talents which individuals possess. Talents in individuals differ as much as any quality of man.

In the space below, briefly explain how these tremendous differences in talents among individuals are related to the world of work.

_____

_____

_____

_____

_____

20. For purposes of this test, let us assume that you have selected a life's career. In the space below, write the name or title of this career and then list THREE educational and/or training requirements for this career.

Career title: _____

Educational and/or training requirements:

(1) _____

(2) _____

(3) _____

21. It is obvious that education or special training is valuable and necessary to enter a given career. So, there are good reasons for the training and educational requirements which have been set up.

For each requirement you listed in question 19, give a brief reason why you feel this requirement is necessary or important for entering this particular career.

Requirement 1 is necessary or important because _____

_____

_____

Requirement 2 is necessary or important because_____

_____

_____

Requirement 3 is necessary or important because_____

_____

_____

22. Assume that you are really serious about pursuing this career (the one you selected in item 20). Now answer the following questions about it.

(1) What would the title be for the educational or training program you would need to enter?

Title:_____

(2) Can you mention ONE school, institution, or place that offers this program?

_____

(3) How long is the learning time for this career?

_____ years _____ months

(4) Approximately what is the total cost of this entire educational or training program?

$_____

23. Keeping in mind that the world of work is always changing, list THREE steps you should take or things you should do to keep up-to-date in the career you selected.

(1)_____

(2)_____

(3)_____

24. Select an occupation of interest to you and then do the following:

(1) Write the name of the occupation_____

(2) List FIVE common tools, materials, or processes used in this occupation.

_____

_____

_____

_____

_____

25. Select any TWO of the above-mentioned tools and briefly explain how to use them.

Tool #1 (name of tool)_____

How to use:_____

_____

_____

_____

Tool #2 (name of tool)_____

How to use:_____

_____

_____

_____

APPENDIX D

SCORING KEY FOR CAREER EDUCATION TEST

Developed by: Dr. William R. Hoots, Jr.
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General Guide for Scoring:

1. Try to capture the thought or idea the student is endeavoring to present. For example, if a student says he wants to be a plummer or sturdist, these may appear to be meaningless student responses. However, with a little patient understanding, the scorer sees them as plumber and stewardess which are perfectly acceptable responses! So, DISREGARD SPELLING, WEAK GRAMMATICAL CONSTRUCTION, AND INCORRECT PUNCTUATION. Although these things are important, these do not represent the objectives which this instrument was designed to measure.

2. Attempt to decipher poor handwriting in an effort to group the intent of the student. However, if the meaning is still unclear after a third rereading, mark the response incorrect and move to the next item.

3. All of the above is to say that the mechanics of the response should be ignored in favor of the obvious spirit or intent of the student's answer. BUT, do not give the student credit for something he has not stated. Do not read into his answer implied meanings which are not really there.

4. Do not score each student's test paper individually from item 1 through 25.

Experience has shown that the scoring is more reliable and that it is actually easier to score a set of test papers if the same item (or group of related items) is scored for the first student, for the second student, and so on. The scorer then returns to the next item (or group or related items) and scores it (them) for the first student, for the second student, and so on. This procedure is followed until all items have been scored for all students.

The recommended plan for scoring items in this test is as follows;

1, 2, and 3	15
4 and 5	16
6 and 7	17 and 18
8	19
9A and 9B	20, 21, and 22
10	23
11, 12A, 12B, and 12C	24 and 25
13 and 14	

Note; Score items 1, 2, and 3 (as a group) for each student.

1. Value: 1 point

   Answer must specify a way of learning about oneself, for example:

   By reading (books)
   By talking to teacher/s or guidance counselor
   By taking tests, interest inventories, personality sheet
   By doing something (manipulative activity or homework)
   By school report cards

2. Value: 1 point each correct response

   Total possible points: 3

3. Value: 3-2-1-0 points

   3 points - Answer must mention a specific career title.
   Answer must relate information from item 2 to the career mentioned.
   Answer must contain at least 2 sentences related to each other and to the specified career.

   2 points - Answer must mention a career or career field (family of occupations).
   Answer must relate information from item 2 to the career mentioned.
   Answer must contain at least 1 sentence related to the specified career.

   —— 1 point - Answer must relate information from item 2 to some career title or career field (family of occupations).

Note: Score items 4 and 5 (as a group) for each student.

4. Value: 1 point each correct response

   Each answer must specify a career, any occupation, job title, or family of occupations.
   Also acceptable: "work at a gas station," "computer work," or equivalent.

   The answers need not be related to any previous answers or to each other.

   Total possible points: 3

5. Career 1

No points are given for responding to the "Career 1" blank, but the response must correspond (either by words or numbers) to one of the answers given in item 4.

If it does not correspond or is left blank, then score the entire item zero. It the "Career 1" blank is filled in properly, score rest of item as follows:

Responses for (1), (2), and (3):

Value: 1 point each correct response

Each response must be a personal characteristic of the individual and not a feature or characteristic of the job or career. And, responses must be reasonably related to the career identified in "Career 1" blank.

Subtotal possible points: 3

Career 2 - Score in same manner as above

Subtotal possible points: 3

Career 3 - Score in same manner as above

Subtotal possible points: 3

Total possible points for item 5: 9

Note: Score items 6 and 7 (as a group) for each student.

6. Value: 1 point each correct response

Response may be a career, job or occupational title, family of occupations, or a phrase related to the world of work, e.g. "working in an office."

Total possible points: 2

7. (Section]) - "Career 1"

No credit is given for responding to "Career 1" blank, but there must be a response and it must correspond (either by words or numbers) to one of the answers given in item 6.

If there is no response in the "Career 1" blank, or if it does not correspond to one of the answers given in item 6, then score this section of the item zero and proceed to the next section.

If the response is satisfactory in the "Career 1" blank, then score responses 1 and 2 as follows:

(1) Give credit if the response refers to a personal trait or characteristic which would be in conflict with the career mentioned. For example:

(Dress designer) - "I have a poor imagination."

(2) Give credit if the response is worded in such a manner as to infer a personal trait or characteristic.

(Factory worker) - "I don't want to be a factory worker because they have short lunch periods."

The inference is that the student's physical and mental make-up is such that he cannot eat rapidly or stand the pressure of having to do so.

If the inference comes easily to the scorer, grant credit for the response; if not, deny credit.

(3) Do not give credit for a response which focuses on the job and shows no relation to the student's personal traits or characteristics. For example:

"It would be dull and boring." or "My uncle has a job like this."

(4) For credit, the response must relate directly to a personal trait or characteristic or by easy inference suggest conflict to the individual's make-up and be inharmonious with the career mentioned.

Total possible points: 3

(Section 2) - "Career 2" - Score in same manner as above

Total possible points: 3

Total possible points for item 7: 6

Note: Score item 8 separately for each student.

8. Value: 1 point each correct response

Total possible points: 3

Response must indicate if it is referring to work or to play. For example, the responses: (a) "you might get hurt" or (b) "it is hard" do not indicate whether the subject is work or play. Score such responses zero.

Also, if student says: "work is hard" on one line and "play is easy" on the second line, consider this as one response (not two).

Note: Score items 9A and 9B (as a group) for each student.

9.A. Value: 1 point each correct response

Total possible points: 3

B. Value: 1 point each correct response

Total possible points: 3

Note: Score item 10 separately for each student.

10. Value: 1 point each correct response

Total possible points: 3

Note: Score items 11, 12A, 12B, and 12C, (as a group) for each student.

11. Value: 1 point each correct response

For full credit, each response must be different and distinct. For example, full credit may be given for: (1) work provides money, (2) work provides outlet for creativity, (3) work provides self-satisfaction. Only 1 point may be given for closely related responses like (1) money for food, (2) money for clothing, (3) money for shelter.

Total possible points: 3

12.A. Value: 1 point for response to: "If I were a/an"

Value: 2-1-0

2 points - Answer clearly relates response #1 from item 11 to the career mentioned in: "If I were a/an"

1 point - Answer is vaguely related or related by implication and lacks clarity

0 points - No relation indicated

Total possible points: 3

12.B. Value: 1 point for response to: "If I were a/an"

Value: 2-1-0 points for remainder of item

2 points - Answer clearly relates response #2 from item 11 to the career mentioned in: "If I were a/an"

1 point - Answer is vaguely related or related by implication and lacks clarity

0 points - No relation indicated

Total possible points: 3

12.C. Score same as above (except response must relate to #3 in item 11)

Total possible points: 3

Note: Score items 13 and 14 (as a group) for each student.

13. Value: 1 point each item

Total possible points: 3

14. Value: 1 point each item

Total possible points: 3

Check total possible points given item 13; a student cannot score higher on this item than he did on item 13.

Note: Score item 15 separately for each student.

15. Value: 1 point each correct response

Implications are permitted here. For if a student lists "football, baseball, and basketball," he is implying that he has talent in sports. However, he would receive only 1 point for the 3 responses since they are so close and seem to imply only one talent (sports). On the other hand, such responses as "playing the piano, dancing, and singing" are further apart and merit 1 point each.

Total possible points: 3

Note: Score item 16 separately for each student.

16. "Special or Personal Talent" blanks

No points are given for responses in these blanks, but the responses should duplicate or paraphrase those from item 15; they need not be in the same order. However, if the responses are omitted here, score the item by referring to item 15.

"Possible Careers" blanks
Value: 1 point each correct response

Each response must be generally related to the "Special or Personal Talent" mentioned.

Total possible points: 6

Note: Score items 17 and 18 (as a group) for each student.

17. Value: 1 point each correct response

This is scored either as 2 points or zero; there is no in-between. A student gets 1 point for correctly responding to the "Career Choice" and 1 point for "lack of talent."

Total possible points: 2

18. Value: 1 point each correct response

Response must relate to answer in item 17. Response must provide a logical reason or answer the question why.

Total possible points: 2

Note: Score item 19 separately for each student.

19. Value: 2-1-0 points

2 points - Response clearly relates differences in talents among individuals to the world of work.

1 point - Response shows some relationship (student has an idea), but answer needs further refinement.

0 points - Response fails to connect diversity of talents and the world of work.

Note: Score items 20, 21, and 22 for each student.

20. Value: 1 point each correct response

"Career Title": Give 1 point for title of career, job, occupation or family of occupations. Give credit for this response even if student does not complete rest of item.

"Educational and/or training requirements": Give 1 point for each reasonable response.

Do not give individual credit for requirements which duplicate, repeat, or are very similar to each other. For example, responses, such as, "proper schooling," "proper training," and "diploma" are considered very similar. Allow 1 point (total) for these responses.

Do not give any points for the "requirements" unless the career title is mentioned in the preceding section (Career Title).

Total possible points: 4

21. Value: 1 point for each "requirement" response

Review responses to item 20, then score the three requirements in item 21 at one time for each test paper.

Note credit given for item 20. If you have "lumped" similar requirements, be sure this is reflected in scoring item 21.

The response to requirement 1 in item 21 must match requirement 1 in item 20; requirement 2 (item 20) must match requirement 2 in item 21; requirement 3 (item 20) must match requirement 3 in item 21.

Total possible points: 3

22. Value: 1 point each correct response

Responses must be reasonably related to career title identified in item 20.

If career title is not given in item 20, score zero for this item.

Interpret response #4 (cost) in terms of student's response to #3 (learning time). Be generous in scoring #4; give student benefit of doubt.

Total possible points: 4

Note: Score item 23 separately for each student.

23. Value: 1 point each correct response

Career need not be specified here nor is it necessary to refer to any previous item (although it may refer to item 20).

Give credit for each response that makes sense or seems reasonable for keeping up-to-date in a career. However, do not give credit for disjointed or fuzzy thinking. For example, the response, "newspapers" gets no credit because it is incomplete, vague, and has no real bearing on specific occupational work.

Total possible points: 3

Note: Score items 24 and 25 (as a group) for each student.

24. Value: 1 point each correct response

24. cont.

If "name of occupation" (1) is left blank or is incorrectly filled cut, score entire item zero.

Total possible points: 6

25. Value: 1 point each correct response for how to use a tool

No credit is given for filling in the blanks "Tool 1" and "Tool 2" since credit was awarded in the previous item.

But, no credit for "how to use" the tool can be given unless the name of the tool is given.

The names of "Tool 1" and "Tool 2" must be mentioned in the list of tools in item 24; if NOT, score entire item zero.

The response, "how to use" must emphasize how; no credit is given for what it is used for or why it is used.

Total possible points: 2